

Listing of Claims

1-3 (CANCELED)

- 1 4. (Previously Presented) A system for developing an application user interface, the system
2 comprising:
3 an integrated development environment configured for a developer to specify a user
4 interface element in the application user interface, the user interface element
5 having a user customizable property, the application user interface being
6 configured as an interface between an internet application and a user;
7 an application designer configured to produce metadata characterizing the customizable
8 property; and
9 a data repository including a data record associated with the customizable property, the
10 data record being modifiable by a user of the internet application and accessible
11 using the metadata.
- 1 5. (Previously Presented) The system of claim 4, wherein a state of the user customizable
2 property is configured to persist between a display of the application user interface and
3 another display of the application user interface.
- 1 6. (Previously Presented) The system of claim 4, further including an application server
2 configured to support the internet application.
- 1 7. (Currently Amended) The system of claim 4, wherein the integrated development
2 environment is further configured to associate the user interface element with a procedure

3 within the internet application, the procedure configured to receive data entered by the
4 user in a field of the user interface element.

1 8. (Previously Presented) The system of claim 4, further including means for generating the
2 internet application interface.

1 9. (Previously Presented) A system for developing an application user interface, the system
2 comprising:
3 an integrated development environment configured for a developer to specify a user
4 interface element in the application user interface, the user interface element
5 having a user customizable property, the user customizable property being a
6 response to a user input device, the application user interface being an interface
7 between a user and an internet application;
8 a data repository including a data record configured to store a value characterizing the
9 user customizable property, the value being user modifiable; and
10 an application designer configured to produce metadata for accessing the data record.

1 10. (Previously Presented) The system of claim 9, further including an internet application
2 system configured to support the internet application.

1 11. (Previously Presented) The system of claim 9, wherein a state of the user customizable
2 property is configured to persist between a displaying of the application user interface
3 and another displaying of the application user interface.

1 12. (Previously Presented) The system of claim 9, wherein the customizable property is further
2 responsive to an identity of the user.

1 13. (Previously Presented) A system for developing an internet application user interface, the
2 system comprising an integrated development environment configured for specifying a
3 user interface element in the internet application user interface, the user interface element
4 having a user customizable tab-order property, the integrated development environment
5 including an application designer configured to produce metadata configured to
6 characterize the customizable tab-order property.

1 14. (Previously Presented) A system for developing an application user interface associated with
2 an internet application comprising:
3 an integrated development environment configured for a developer to specify a user
4 interface element in the application user interface, the user interface element
5 having a user customizable tab-order property, the integrated development
6 environment including an application designer configured to produce metadata to
7 access a data record; and
8 a data repository including the data record for storing data characterizing the
9 customizable tab-order property, the data being user modifiable.

1 15. (Previously Presented) The system of claim 14, wherein the customizable tab-order property
2 includes tab-over.

1 16. (Previously Presented) The system of claim 15, wherein the integrated development
2 environment is further configured to specify an additional user interface element in the
3 application user interface, the additional user interface element specifiable to be skipped
4 in a tab-order.

1 17. (Previously Presented) The system of claim 16, wherein the additional user interface element
2 is a button.

1 18. (Previously Presented) The system of claim 16, wherein the additional user interface element
2 is an image.

1 19. (Previously Presented) The system of claim 14, wherein the customizable tab-order property
2 is configurable according to a class of user interface elements.

1 20. (Previously Presented) The system of claim 14, wherein the customizable tab-order property
2 is configurable according to the identity of a user.

1 21. (Previously Presented) The system of claim 14, wherein the customizable tab-order property
2 is configurable according to the identity of a client.

1 22. (Previously Presented) The system of claim 14, wherein the metadata is configured to
2 characterize the tab-order property of a specific application component.

1 23. (Previously Presented) The system of claim 14, wherein the metadata includes a query for
2 accessing the data record.

1 24. (Previously Presented) The system of claim 14, wherein the data is user modifiable using a
2 personalization system integrated into the internet application.

1 25. (Previously Presented) The system of claim 14, wherein the data record includes a reference
2 to an additional data record, the additional data record including additional data further
3 characterizing the customizable tab-order property.

1 26. (Previously Presented) The system of claim 25, wherein the additional data is user
2 modifiable.

1 27. (Previously Presented) A customizable application system comprising:
2 an internet application system configured to support an internet application;
3 an application user interface including a user interface element, the application user
4 interface configured as an interface between the internet application and a user,
5 the user interface element including a user customizable tab-order property, the
6 user interface element configured for delivery to a client over a computer
7 network;
8 metadata characterizing the customizable tab-order property; and
9 a data repository including a data record configured to store a value characterizing the
10 customizable tab-order property, the value being user modifiable.

1 28. (Previously Presented) The customizable application system of claim 27, wherein the client
2 is configured to display the application user interface using standard web browser
3 protocols.

1 29. (Previously Presented) The customizable application system of claim 27, wherein the client
2 is configured to display the application user interface using features of a web browser,
3 the features not requiring a browser add-on, plug-in, or extensions.

1 30. (Previously Presented) The customizable application system of claim 27, further including
2 means for generating the application user interface using the metadata.

1 31. (Previously Presented) The customizable application system of claim 27, wherein the data
2 record includes additional metadata.

1 32. (Previously Presented) The customizable application system of claim 27, further including a
2 personalization system configured to modify the data record.

1 33. (Previously Presented) The customizable application system of claim 32, wherein the data
2 repository includes a user profile configured to store personalization data generated using
3 the personalization system.

1 34. (Previously Presented) An internet application system comprising:
2 a user interface generator configured to generate a user interface including a user
3 interface element, the user interface being compatible with a standard web
4 browser and being generated in response to a request from a user, the user
5 interface element including a user customizable tab-order property;
6 a web application server configured to deliver the user interface to a client; and
7 an internet application accessible to the user through the generated user interface.

1 35. (Previously Presented) The internet application system of claim 34, wherein the user
2 interface generator is further configured to use metadata for characterizing the
3 customizable tab-order property.

1 36. (Previously Presented) The internet application system of claim 34, wherein the
2 customizable tab-order property includes tab-over.

1 37. (Previously Presented) The internet application system of claim 34, wherein the user
2 interface generator is further configured to use metadata for characterizing the tab-order
3 property, the metadata including a reference to a data record, the data record including a
4 user defined parameter.

1 38. (Previously Presented) The internet application system of claim 34, wherein the user
2 interface generator is configured to use a user modifiable data record for characterizing
3 the tab-order property.

1 39. (Previously Presented) The internet application system of claim 34, wherein the internet
2 application includes a configuration system configured to modify data characterizing the
3 tab-order property.

1 40. (Previously Presented) The internet application system of claim 34, wherein the client is a
2 wireless system.

1 41. (Previously Presented) An internet application comprising:
2 a computer program configured to run on an internet application system;

3 an application user interface including a user interface element with a customizable tab-
4 order property, the application user interface configured for delivery to a client
5 and to operate as an interface between a user and the internet application;
6 a user modifiable data record stored in a location physically remote from the client, the
7 data record configurable for use by a user interface generator to generate the
8 application user interface, the data record further configurable to characterize the
9 customizable tab-order property; and
10 metadata configurable for use by the user interface generator to access the user
11 modifiable data record.

1 42. (Previously Presented) The internet application of claim 41, wherein the metadata includes a
2 query.

1 43. (Previously Presented) The internet application of claim 41, wherein the data record is
2 further configured such that generation of the application user interface is responsive to
3 an identity of the client.

1 44. (Previously Presented) The internet application of claim 41, wherein the data record is
2 further configured such that generation of the application user interface is responsive to
3 an identity of the user.

1 45. (Previously Presented) The internet application of claim 41, wherein the data record is
2 configurable using a configuration interface.

1 46. (Previously Presented) An application user interface between a user and an internet
2 application, the application user interface including a user interface element, the
3 application user interface further being generated using metadata and being configured
4 for display using a standard web browser, the metadata being configured to access a user
5 modifiable data record that includes a value characterizing a user customizable tab-order
6 property, the user interface element including the user customizable tab-order property.

1 47. (Previously Presented) The application user interface of claim 46, wherein the value
2 characterizing a user customizable tab-order property is dependent on an identity of a
3 user of the application user interface.

1 48. (Previously Presented) The application user interface of claim 46, wherein the user
2 customizable tab-order property includes tab-over configurable to be responsive to a class
3 of user interface elements.

1 49. (Previously Presented) The application user interface of claim 46, wherein the application
2 user interface is a user profile interface.

1 50. (Previously Presented) The application user interface of claim 46, further including means
2 for displaying the application user interface.

1 51. (Previously Presented) A customizable application system comprising:
2 an internet application system configured to support an internet application, the internet
3 application including metadata configured for generating an application user
4 interface with a user interface element, the internet application system including,

5 a) an application server configured to generate the application user

6 interface, and

7 b) a web application server configured to deliver the application user

8 interface to a client;

9 an application development system configured to generated the metadata, the metadata

10 being further configured to access configuration data characterizing a tab-order

11 property of the user interface element;

12 a configuration system including a configuration engine and a configuration interface, the

13 configuration interface configured to modify the configuration data;

14 a data repository including a data record for storing the configuration data, the data

15 record being accessible using the metadata.

1 52. (Previously Presented) A customizable application system comprising:

2 an internet application system configured to support an internet application, the internet

3 application associated with metadata configured for generating an application user

4 interface including a plurality of user interface elements having a tab-order

5 property, the internet application system including,

6 a) an application server configured to generate the application user

7 interface, and

8 b) a web application server configured to deliver the application user

9 interface to a client;

10 a personalization system including a personalization engine and a user profile interface,

11 the personalization interface configured for modification of personalization data

12 characterizing the tab-order property such that the tab-order of the plurality of
13 user interface elements is modified; and
14 a data repository including a data record for storing the personalization data, the data
15 record being accessible using the metadata.

1 53. (Previously Presented) A method of developing a user interface element, the method
2 comprising the steps of:
3 selecting a customizable property;
4 including the customizable property in the user interface element;
5 determining a data record for holding a value to characterize the customizable property,
6 the data record being stored in a data repository and being user modifiable, the
7 data repository being physically remote from a client used to display an HTML
8 based application user interface;
9 generating metadata further characterizing the customizable property, the metadata
10 including a reference to the data record; and
11 storing the metadata in association with the user interface element, the user interface
12 element being configurable for inclusion in the HTML based application user
13 interface.

1 54. (Previously Presented) The method of claim 53, wherein the application user interface is
2 configured for accessing an internet application.

1 55. (Previously Presented) The method of claim 54, wherein the step of determining a data
2 record is responsive to the identity of a user.

1 56. (Previously Presented) The method of claim 54, wherein the user modifiable data record is
2 configured such that the value used to characterize the customizable property persists
3 between a generation of the application user interface and another generation of the
4 application user interface.

1 57. (Previously Presented) The method of claim 54, wherein the customizable property includes
2 a response to a user input device.

1 58. (Previously Presented) The method of claim 53, wherein the customizable property includes
2 tab-order.

1 59. (Previously Presented) A method of developing an application user interface associated with
2 an internet application, the method comprising the steps of:
3 selecting a user customizable user interface element associated with a data record, the
4 data record being stored in a data repository and being user modifiable, the data
5 repository being physically remote from a client used to display the application
6 user interface;
7 including the user customizable user interface element in the application user interface;
8 generating metadata characterizing the user customizable user interface element, the
9 metadata including a reference to the data record; and
10 storing the metadata in association with the internet application, the internet application
11 being configured for access using the application user interface.

1 60. (Previously Presented) The method of claim 59, wherein the application user interface is
2 generated responsive to the identity of a requestor.

1 61. (Previously Presented) The method of claim 59, wherein the user modifiable data record is
2 configured such that a value stored in the data record and used to characterize the
3 customizable property persists between a generation of the application user interface and
4 another generation of the application user interface.

1 62. (Previously Presented) The method of claim 59, wherein a customizable property of the user
2 customizable user interface element includes a response to a user input device.

1 63. (Previously Presented) The method of claim 59, wherein a customizable property of the user
2 customizable user interface element includes tab-order.

1 64. (Previously Presented) A method of generating an application user interface, the method
2 comprising the steps of:
3 accessing a page definition, the page definition including metadata for defining a user
4 customizable property of the application user interface;
5 obtaining a reference to a user modifiable data record, using the metadata;
6 accessing the user modifiable data record using the reference, the data record being stored
7 in a data repository physically remote from a client used to display the customized
8 application user interface;
9 reading the data record to determine a value characterizing the user customizable
10 property;

11 generating markup-language responsive to the value; and
12 including the generated markup-language in the application user interface.

1 65. (Previously Presented) The method of claim 64, wherein the application user interface is an
2 interface to an internet application.

1 66. (Previously Presented) The method of claim 64, further including modifying the value using
2 a configuration system.

1 67. (Previously Presented) The method of claim 64, wherein the user customizable property is a
2 response to a user input device.

1 68. (Previously Presented) The method of claim 64, wherein the user customizable property is
2 tab-order.

1 69. (Previously Presented) The method of claim 64, wherein the application user interface is
2 configurable for display using standard web browser protocols.

1 70. (Previously Presented) A method of customizing tab-order in an HTML based application
2 user interface, the method comprising the steps of:
3 accessing a configuration system, the configuration system including a configuration
4 engine and a configuration interface;
5 selecting, using the configuration interface, a tab-order property of a user interface
6 element in the HTML based application user interface, the tab-order property
7 being user customizable; and

8 specifying configuration data using the configuration interface, the configuration data
9 characterizing the tab-order property and the configuration data being stored in a
10 data repository physically remote from a client used to display the HTML based
11 application user interface, the HTML based the application user interface being an
12 interface between a user and an internet application.

1 71. (Previously Presented) The method of claim 70, wherein the tab-order property is a tab-over
2 property.

1 72. (Previously Presented) The method of claim 70, wherein the configuration data is configured
2 such that a state of the HTML based application user interface persists between a
3 generation of the HTML based application user interface and another generation of the
4 HTML based application user interface.

1 73. (Previously Presented) The method of claim 70, further including a step of modifying the
2 configuration data using a personalization system.

1 74. (Previously Presented) The method of claim 70, wherein the HTML based application user
2 interface is displayed at the client without requiring a browser add-on, plug-in, or
3 extension.

1 75. (Previously Presented) A method of customizing tab-order in an application user interface,
2 the method comprising the steps of:
3 accessing a configuration system, the configuration system including a configuration
4 engine and a configuration interface;

5 selecting, using the configuration interface, a tab-order property of a user interface
6 element in the application user interface, the tab-order property being user
7 customizable;
8 specifying configuration data using the configuration interface, the configuration data
9 characterizing the tab-order property; and
10 generating the application user interface using the specified configuration data, the
11 application user interface being HTML based and being configured to access an
12 internet application.

1 76. (Previously Presented) The method of claim 75, further including displaying the application
2 user interface using standard web browser protocols.

1 77. (Previously Presented) The method of claim 75, wherein the tab-order property is a tab-over
2 property.

1 78. (Previously Presented) The method of claim 77, wherein the tab-over property is
2 configurable responsive to a class of user interface elements.

1 79. (Previously Presented) The method of claim 75, wherein the step of generating the
2 application user interface is responsive to an identity of a user.

1 80. (Previously Presented) A method of executing an internet application comprising the steps
2 of:
3 receiving a request for an application user interface from a client, the application user
4 interface including a user interface element;

5 accessing a page definition, the page definition including metadata and defining the
6 requested application user interface;
7 retrieving a value characterizing a user customizable tab-order property of the user
8 interface element using the metadata, the value being stored in a data repository
9 physically remote from the client;
10 generating HTML responsive to the value;
11 including the generated HTML in the application user interface; and
12 delivering the application user interface to the client, the application user interface being
13 an interface between a user and the internet application.

1 81. (Previously Presented) The method of claim 80, wherein the user customizable tab-order
2 property is a user customizable tab-over property.

1 82. (Previously Presented) The method of claim 80, wherein the value is personalization data.

1 83. (Previously Presented) The method of claim 80, further including displaying the application
2 user interface at the client using standard web browser protocols.

1 84. (Previously Presented) The method of claim 80, wherein the step of retrieving a value uses
2 an identity of a requester of the application user interface.

1 85. (Previously Presented) A method of generating an application user interface including a
2 customizable tab-order property, the method comprising the steps of:
3 accessing a page definition, the page definition including metadata characterizing the
4 customizable tab-order property;

5 reading a value from a data record using the metadata, the data record being stored in a
6 data repository physically remote from a client used to display the application
7 user interface, the value being user modifiable and further characterizing the
8 customizable tab-order property;
9 generating HTML responsive to the value; and
10 including the HTML in the application user interface, the application user interface being
11 an interface to an internet application.

1 86. (Previously Presented) The method of claim 85, wherein the customizable tab-order property
2 is a customizable tab-over property.

1 87. (Previously Presented) The method of claim 85, wherein the data record includes
2 configuration data.

1 88. (Previously Presented) The method of claim 85, further including displaying the application
2 user interface using standard web browser protocols.

1 89. (Previously Presented) The method of claim 85, wherein a state of the customizable tab-
2 order property persists between a generation of the application user interface and another
3 generation of the application user interface.

1 90. (Previously Presented) The method of claim 85, further including identifying a requestor of
2 the application user interface, wherein the step of reading a value is responsive to an
3 identity of the requestor.

1 91. (Previously Presented) A method of generating an application user interface configured for
2 delivery from a server to a client, the method comprising the steps of:
3 receiving, at the server, a request for the application user interface from the client, the
4 application user interface including a user interface element;
5 identifying the requester of the application user interface;
6 accessing a page definition, the page definition including metadata and defining the
7 application user interface;
8 retrieving, using the metadata and the identity of the requester, a value relating to a user
9 customizable tab-order property of the user interface element, the value being
10 stored in a data repository physically remote from the client;
11 generating HTML or Java script using the value; and
12 including the HTML or Java script in the application user interface.

1 92. (Previously Presented) The method of claim 91, wherein the user customizable tab-order
2 property is a user customizable tab-over property.

1 93. (Previously Presented) The method of claim 91, further including displaying the application
2 user interface at the client using standard web browser protocols.

1 94. (Previously Presented) A computer readable medium including an internet application, the
2 internet application comprising:
3 metadata defining an application user interface, the application user interface including a
4 user interface element with a user customizable tab-order property, the application

5 user interface configured for delivery to a client and configured to operate as an
6 interface between a user and the internet application;
7 a user interface generator configured to generate the application user interface using a
8 user modifiable data record stored in a location physically remote from the client,
9 the user modifiable data record configurable to characterize the user customizable
10 tab-order property; and
11 a configuration system configured for a user to modify the user modifiable data record.

1 95. (Previously Presented) A computer readable medium including an internet application, the
2 internet application comprising:

3 an application designer configured to develop an application user interface, the
4 application user interface including a user interface element with a user
5 customizable tab-order property, the application user interface configured for
6 delivery to a client and configured to operate as an interface between a user and
7 the internet application;
8 a user interface generator configured to generate the application user interface using a
9 user modifiable data record stored in a location physically remote from the client,
10 the user modifiable data record configurable to characterize the user customizable
11 tab-order property; and
12 a configuration system configured for a user to modify the user modifiable data record.

1 96. (Previously Presented) An application execution system comprising:

2 means for supporting an internet application;

3 means for generating an application user interface using a user modifiable data record
4 configured to store data characterizing a user customizable tab-order property;
5 and
6 means for providing the application user interface to a user, the application user interface
7 including a user interface element, the application user interface configured as an
8 interface between the internet application and the user, the user interface element
9 including the user customizable tab-order property, the user interface element
10 configured for delivery to a client over a computer network.